

REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-8 are presently active in this case, Claims 1-3 and 8 having been amended by way of the present Amendment.

In the outstanding Official Action, Claim 1 was objected to for minor informalities. Claim 1 has been amended as suggested in the Official Action to correct the informalities. Accordingly, the Applicants request the withdrawal of the objection to Claim 1.

Claims 3, 5, and 7 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 3 has been amended to correct the antecedent basis problem. Accordingly, the Applicants request the withdrawal of the indefiniteness rejection.

Claims 1 and 2 were rejected under 35 U.S.C. 103(a) as being unpatentable over Archambault (U.S. Patent No. 6,567,196) in view of Tomonaga et al. (U.S. Patent No. 5,878,025). Claim 3 was rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al. (U.S. Patent No. 6,041,152) in view of Tomonaga et al. Claim 4 was rejected under 35 U.S.C. 103(a) as being unpatentable over Archambault in view of Tomonaga et al. and further in view of Takeda et al. (U.S. Patent No. 6,091,538). Claim 5 was rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al. in view of Tomonaga et al. and further in view of Takeda et al. Claim 6 was rejected under 35 U.S.C. 103(a) as being unpatentable over Archambault in view of Tomonaga et al. and further in view of Yamamoto et al. (U.S.

Patent No. 6,021,235). Claim 7 was rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al. in view of Tomonaga et al. and further in view of Yamamoto et al. Claim 8 was rejected under 35 U.S.C. 103(a) as being unpatentable over Archambault in view of Tomonaga et al. and further in view of Takeda et al. and Kosaka (U.S. Patent No. 5,675,432). For the reasons discussed below, the Applicants request the withdrawal of the obviousness rejections.

The basic requirements for establishing a *prima facie* case of obviousness as set forth in MPEP 2143 include (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings, (2) there must be a reasonable expectation of success, and (3) the reference (or references when combined) must teach or suggest all of the claim limitations. The Applicants submit that a *prima facie* case of obviousness cannot be established in the present case because the cited references, either when taken singly or in combination, do not teach or even suggest all of the claim limitations.

Claims 1 and 3 each recite an optical wavelength division multiplexing and transmission apparatus comprising, among other features, a master rack and at least one slave rack, wherein the master rack accommodates a synthetic optical wavelength multiplexer in which the first multiplexed signal output from the first optical wavelength multiplexer and a second multiplexed signal are multiplexed with each other and a synthetic multiplexed signal is output, and an amplifier in which the synthetic multiplexed signal output from the synthetic optical wavelength multiplexer is multiplied.

With regard to Claim 1, the Official Action acknowledges that the Archambault reference, the Takeda et al. reference, and the Tomonaga et al. reference fail to disclose or suggest an amplifier for a synthetic multiplexed signal (see page 12 of the Official Action). The Kosaka reference is cited for the teaching of such a feature. More specifically, the Official Action cites optical amplifier unit (9) for amplifying the output of optical star coupler (19). However, the optical amplifier (9) is accommodated separately from the unit (8), in which the optical star coupler (19) is provided. As noted above, Claim 1 recites a synthetic optical wavelength multiplexer, and an amplifier in which the synthetic multiplexed signal output from the synthetic optical wavelength multiplexer is multiplied, which are both accommodated in a master rack. Such a configuration is not disclosed or suggested by the teachings of the Kosaka reference. The Tomonaga et al. reference is generally cited for the teaching of the different racks recited in the claims, however this reference does not disclose or even suggest the provision of the various recited components in the groupings defined in the claims absent hindsight considerations.

Thus, the cited references do not disclose or suggest either singly or in combination the recited master rack and slave rack configuration defined in Claim 1 of the present application. Accordingly, the Applicants respectfully request the withdrawal of the obviousness rejection of Claim 1.

Claim 3 recites the features discussed above with respect to Claim 1. With regard to Claim 3, the Official Action noted that the Clark et al. reference does not disclose a master rack and at least a slave rack configured as claimed. Furthermore, the Official Action notes

that the Clark et al. reference does not disclose an optical amplifier in which the second multiplexed signal output from the second optical wavelength multiplexer is multiplied. In fact, the Clark et al. reference does not disclose a configuration that incorporates amplifiers. Accordingly, the Clark et al. reference clearly does not disclose or suggest a master rack and a slave rack, wherein the master rack accommodates, among other features, an amplifier in which the synthetic multiplexed signal output from the synthetic optical wavelength multiplexer is multiplied, as recited in Claim 3.

Thus, the cited references do not disclose or suggest either singly or in combination the recited master rack and slave rack configuration defined in Claim 3 of the present application. Accordingly, the Applicants respectfully request the withdrawal of the obviousness rejection of Claim 3.

Claim 2 recites an optical wavelength division multiplexing and transmission apparatus comprising, among other features, a master rack and at least a slave rack, wherein the slave rack accommodates a second optical wavelength demultiplexer in which the second multiplexed signal output by the synthetic optical wavelength demultiplexer is demultiplexed, and an optical amplifier in which the second multiplexed signal output from the synthetic optical wavelength demultiplexer is multiplied.

The Official Action cites the Archambault reference for the teaching of a synthetic demultiplexer at feature (110) and a first optical demultiplexer at feature (135-1) in Figure 1. The Official Action notes amplifier (101) upstream of feature (110), however, no such amplifier is between feature (110) and feature (135-1). Thus, the Archambault reference fails

to disclose an optical amplifier in which the second multiplexed signal output from the synthetic optical wavelength demultiplexer is multiplied, as recited in Claim 2. Furthermore, the Archambault reference in fact teaches away from such an amplifier by teaching that such a configuration would be excessively costly, and therefore should be avoided. (See column 1, line 64, through column 2, line 5.)

Furthermore, the Tomonaga et al. reference is not cited for the above features, and fails to cure the deficiencies noted above in the cited references. Furthermore, as noted above, the Archambault reference teaches away from the amplification of demultiplexed signals in this manner, and therefore one of ordinary skill in the art would not have modified and/or combined the reference in such a manner as to arrive at the invention recited in Claim 2.

Thus, the cited references do not disclose or even suggest either singularly or in combination the configuration defined in Claim 2 of the present application. Accordingly, the Applicants respectfully request the withdrawal of the obviousness rejection of Claim 2.

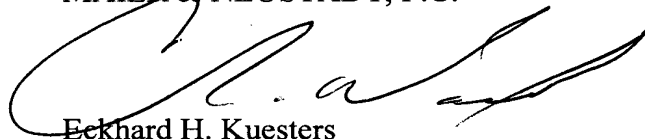
The dependent claims are considered allowable for the reasons advanced for independent claim from which they respectively depend. These claims are further considered allowable as they recite other features of the invention that are neither disclosed nor suggested by the applied references when those features are considered within the context of their respective independent claim.

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Consequently, in view of the above discussion, it is respectfully submitted that the present application is in condition for formal allowance and an early and favorable reconsideration of this application is therefore requested.

Respectfully Submitted,

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